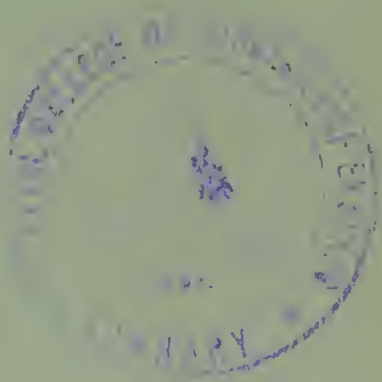


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THE INDUCTION OF PREMATURE LABOR AND
ACCOUCHEMENT FORCÉ IN THE FIRST
5000 LABORS IN THE OBSTETRICAL
DEPARTMENT OF THE JOHNS
HOPKINS HOSPITAL.

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I HAVE thought that it might be interesting and perhaps instructive to bring before you the results following the artificial termination of pregnancy in the first 5000 women delivered in the Obstetrical Department of the Johns Hopkins Hospital, and afterward to give my impressions of the relative merits of the various procedures employed.

In this series of cases it was thought necessary to induce premature labor in 11 and to resort to accouchement forcé in 100 instances, as follows:

Induction of premature labor by Krause's method	11 cases
Accouchement forcé by Harris' method of manual dilatation of the cervix	83 cases
Accouchement forcé by a Champetier de Ribes balloon	15 cases
Accouchement forcé by vaginal Cesarean section .	2 cases

I shall consider each group separately, and afterward give a brief *résumé* of my views concerning the treatment of the various conditions in which the premature termination of pregnancy may be indicated.

The Induction of Premature Labor by Means of a Bougie. (Krause's Method.) This procedure was employed in all cases in which it was deemed advisable for the welfare of

the mother to terminate pregnancy, but in which the rapid emptying of the uterus was not necessary.

Under such circumstances, after exposing the cervix by means of a bivalve speculum, a thick rubber catheter, 10 to 12 mm. in diameter, was introduced as far as possible into the uterine cavity and held in place by a vaginal pack of sterile gauze. This was usually accomplished without difficulty, and as a rule gave rise to uterine contractions within twenty-four hours; though exceptionally a longer period and the introduction of a second bougie were necessary to bring about the desired result. After the onset of uterine contraction labor usually progressed spontaneously and the patients were delivered without difficulty. This method was employed in the following conditions and gave most satisfactory results:

Cardiac lesions with broken compensation	2 cases
Pre-eclamptic toxemia	2 cases
Retention of dead fetus	2 cases
For experimental purposes	2 cases
Hydramnios	1 case
Infection during pregnancy	1 case
Overdevelopment of child	1 case

All of the patients recovered and, upon examination at the time of discharge, the cervix was found to be uninjured in 9 and only slightly torn in 2 cases.

Harris' Method of Manual Dilatation of the Cervix was employed in 83 instances, as follows:

Eclampsia	33 cases
Pre-eclamptic toxemia	7 cases
Placenta previa	12 cases
Danger to mother or child during the course of labor	31 cases

1. *Eclampsia*. Accouchement forcé was resorted to in 33 cases of eclampsia with 7 deaths. As 5 of the patients did not regain consciousness after delivery, their deaths must be attributed to the underlying disease. On the other hand, 2 patients died as the direct result of the operation,

one from infection and the other from incomplete rupture of the uterus.

A better idea of the efficiency and dangers of the operation may be gained from the consideration of the condition of the cervix, as noted immediately after delivery or at examination prior to discharge. The cervix was uninjured in 11, slightly torn in 3, and deeply torn in 19 instances; while in 6 of the latter cases the laceration was so deep as to give rise to serious hemorrhage and necessitate immediate repair. Moreover, it is probable that these figures do not accurately represent the extent of the damage, for the reason that in some of the earlier cases a special note was not made concerning the condition of the cervix at the time of discharge. Therefore, it may well be that a few cases of moderate laceration escaped detection, as it has always been my rule not to make vaginal examinations at the conclusion of the third stage of labor, unless imperatively called for. On the other hand, there can be no doubt as to the accuracy of the statement that 6 cases required immediate repair.

It is manifestly impossible in many cases to state whether the injury was the direct result of the manual dilatation, or followed the attempt to drag the head through an imperfectly dilated cervical opening. At the same time, this distinction is of but slight importance, as in either event the damage should ultimately be attributed to the operation, for if it did not give rise to the deep tear directly, it nevertheless contributed to its production in that it failed to bring about sufficient dilatation to permit prompt delivery.

Still further information as to the value or danger of the operation may be gained by considering the condition of the cervix prior to dilatation, and noting what relation, if any, it bore to the occurrence of laceration. For this purpose I have divided the cases into four groups: (a) Cervical canal intact, external os not dilated. (b) Cervical canal obliterated, external os not dilated. (c) Cervical canal

obliterated, external os less than 4 cm. in diameter. (d) Cervical canal obliterated, external os more than 4 cm. in diameter.

(a) In thirteen of the eclamptic cases the cervical canal was intact and the external os not dilated at the beginning of the operation. Under such conditions it was necessary to effect preliminary dilatation by means of Goodell's or Hegar's dilator, in order to permit the introduction of the tips of two fingers, after which dilatation was completed by Harris' method. Such operations, as a rule, were extremely difficult and required thirty to sixty minutes for their completion. Four of the thirteen patients died. Two did not come out of coma, while the other two deaths were directly attributable to the operation, one from incomplete rupture of the uterus and the other from infection, as is clearly shown by the history of the cases.

Case 496. A forty-eight-year-old multipara entered the hospital for toxemia of pregnancy. While under treatment she had two eclamptic attacks. At that time the cervix was found to be quite hard, the external os just admitting the tip of the little finger. Dilatation was effected without great difficulty by Harris' method and the child turned and delivered. There was no hemorrhage after the extrusion of the placenta, and the patient rallied without difficulty, though considerably shocked. Six days later she had a profuse uterine hemorrhage, from which she died, in spite of packing the uterus, the use of saline infusions and vigorous stimulation. No autopsy was permitted, but vaginal examination showed that the hemorrhage in all probability came from a deep cervical tear extending up into the lower uterine segment and the base of the broad ligament.

Case 571. A twenty-one-year-old multipara was admitted to the hospital in the seventh month of pregnancy, conscious but very drowsy, with a history of having had twelve convulsions. The routine pelvic measurements were

22, 24.5, 28, 17.5 and 11.75 cm. The cervix was very hard and almost cartilaginous in consistency, while the external os would not admit the tip of the little finger. Dilatation was begun with Goodell's instrument and after an hour's efforts its canal would admit only the little finger, so that it was out of the question to attempt Harris' method. Accordingly, a small Champetier de Ribes balloon was introduced, and, upon withdrawing it twenty four hours later, the cervix was found to be considerably softened but only sufficiently dilated to admit the index finger without difficulty. Further dilatation was effected by means of Hegar's graduated bougies and finally by Harris' method. At least one hour was required to bring about sufficient dilatation to permit version and extraction of the dead fetus. The cervix was deeply torn, but as it did not give rise to hemorrhage it was not repaired. Death occurred eleven days later from infection, which the autopsy showed was clearly attributable to the prolonged manipulation and injury to the cervix.

These two deaths do not exhaust the untoward effects of manual dilatation under such circumstances, as one finds that the cervix was uninjured in only three cases, while it was slightly or deeply torn in three and seven cases, respectively. Three of the latter gave rise to profuse hemorrhage and required immediate repair.

(b) Harris' method was employed in seven cases in which the cervical canal was obliterated but the external os not dilated. In this group of cases manual dilatation was usually effected without great difficulty. One patient died in coma while the other six recovered. Even under such circumstances the operation cannot be said to be absolutely devoid of danger, as the cervix was uninjured in only two instances while it was deeply torn in five cases, two of which required immediate repair on account of profuse hemorrhage.

(c) In eleven cases the cervical canal was obliterated and

the external os dilated to less than 4 cm. Under such circumstances, the completion of dilatation by Harris' method was usually very easy and could be effected within a few minutes. One patient died in coma, but none from the effects of the operation. The cervix was not injured in five, but was deeply torn in six cases, one of which gave rise to profuse hemorrhage and required immediate repair.

(d) In two cases the cervical canal was obliterated and the external os dilated to more than 4 cm. in diameter. Completion of dilatation by Harris' method was readily effected. Both patients recovered, but in one the cervix was deeply torn.

2. *Pre-eclamptic Toxemia.* Accouchement forcé by Harris' method was resorted to in seven cases of pre-eclamptic toxemia. In each instance the cervical canal was intact and the external os not obliterated. Preliminary dilatation by means of Goodell's or Hegar's dilators was necessary before Harris' method could be employed and the operation was usually difficult and required considerable time. Two of the patients died—one from toxemia and the other from incomplete rupture of the uterus due to the operation.

In this instance, Case 1126, a thirty-four-year-old V-para, six and one-half months pregnant, was admitted to the hospital with marked albuminuria and very extensive edema, presented muscular twitchings and every symptom of impending eclampsia. The pelvis was normal and the small child lay in the left sacroiliac anterior position. The cervix was already partially dilated, its canal being 2 cm. long, and the external os readily admitted two fingers.

As eclampsia appeared to be imminent, accouchement forcé was deemed necessary, and the cervix was readily dilated by means of Harris' method without appreciable tear, after which a markedly edematous child was extracted without difficulty. There was considerable hemorrhage during the third stage, and, as the placenta could not be expressed by Credé's maneuver, it was removed manually,

when it was found to be immensely dropsical and weighed 1200 grams. Upon introducing the hand into the uterus, a deep tear was discovered on the left side of the cervix, which upon further examination was found to extend up into the broad ligament, giving rise to a cavity 7 or 8 cm. in diameter, which was separated from the abdominal cavity only by the peritoneum. After tightly packing the cavity with gauze the hemorrhage apparently ceased, and the patient was put back to bed in good condition. Two hours later, however, she suddenly became pallid and died in collapse in less than half an hour. An autopsy was not permitted, but vaginal examination after death showed the presence of a large subperitoneal hematoma, which had originated from the incomplete rupture of the uterus.

In two of the seven toxemic cases the cervix was not injured; while it was slightly torn in two and deeply torn in three cases, one of these being the case first described, while in another instance immediate repair was necessary on account of hemorrhage.

3. *Placenta Previa*. Accouchement forcé by Harris' method was employed in twelve cases of placenta previa, in four of which the cervix was intact, while in eight the cervical canal was obliterated and the external os more or less dilated. Three patients died, two of whom were brought to the hospital in an exsanguinated condition and died in collapse immediately after delivery, but in neither instance could the fatal termination be attributed to the operation, as there was no injury to the cervix. The third patient, however, died from hemorrhage from an incomplete rupture of the uterus, which resulted directly from the manual dilatation of the cervix.

This patient (No. 1297), a forty-four-year-old VIII-para, was sent to the hospital markedly exsanguinated following repeated hemorrhages. The pelvis was normal and the nearly full-term child lay in the left occipitoiliac anterior position. On examination, it was found that one had to

deal with a complete placenta previa, and that the cervix was soft and partially obliterated, the external os being 2.5 cm. in diameter. During the examination the hemorrhage became so alarming that it was thought advisable to complete dilatation by Harris' method. This was readily accomplished, though the cervix was felt to tear during the latter part of the operation. The dead child was turned and extracted without difficulty. As there was profuse hemorrhage after the extrusion of the placenta, the cervix was brought to the vulva, and as it was found to be deeply torn on the left side it was repaired at once and the hemorrhage apparently ceased. Four hours later the patient suddenly died, and at autopsy a large sub-peritoneal hemocele was found on the left side of the uterus, which had originated above the sutures uniting an incomplete tear in the lower uterine segment.

Including this case, the cervix was slightly torn in one and deeply torn in six instances, in five of which immediate repair was necessary in order to check hemorrhage.

4. *Danger to Mother or Child.* In thirty-one women who had already fallen into labor, dilatation of the cervix was completed manually by Harris' method when some condition had arisen which so seriously threatened the life of the mother or the child as to render necessary the immediate termination of labor.

The following conditions necessitated interference:

Intrapartum infection	8 cases
Exhaustion, as indicated by a pronounced rise in the maternal pulse	8 cases
Marked variations in the fetal heart rate	5 cases
Prolapsed cord	4 cases
Various indications	6 cases

With one exception, all of the mothers recovered without difficulty, and the single death was in no wise connected with the operation, but was due to profound disturbances resulting from a partial intestinal obstruction and an exten-

sive thrombosis of the vessels of the left leg originating during pregnancy. This case was reported in detail by F. C. Goldsborough (*Bulletin of Johns Hopkins Hospital*, 1904).

In every case of this series the cervical canal was obliterated while the external os was less than 4 cm. in diameter in 9 and dilated to a greater extent in 22 cases. On discharge the cervix was found to be uninjured in 20, slightly torn in 6 and deeply torn in 5 cases, only one of which, however, required immediate repair.

Upon summarizing the results obtained, it is found that Harris' method was employed in 83 cases, as follows:

	Cases.	Deaths.
Eclampsia	33	7
Toxemia	7	2
Placenta previa	12	3
Danger to mother or child at time of labor	31	1

Of the 13 deaths, 4 were clearly due to the operation (4.82 per cent.), 1 patient having died from infection and 3 from hemorrhage following incomplete rupture of the uterus. Each of these deaths occurred in my own hands, so that no blame can be attached to my assistants. Moreover, it should be noted that they all occurred in the first 2500 cases, so that several of them, at least, must be regarded as the premium paid for experience.

The condition of the cervix following the operation is shown in the following table:

	Number of cases.	No tear.	Slight tear.	Deep tear.	Deep tear giving rise to hemorrhage and requiring immediate repair.
Eclampsia	33	11	3	13	6
Toxemia	7	2	2	1	2
Placenta previa	12	5	1	1	5
Danger to mother or child	31	20	6	4	1
	83	38	12	19	14

It would, therefore, appear that the cervix was not injured or only slightly torn in 50 out of 83 cases, while it was deeply lacerated in 33 (39.79 per cent.). In 14 of the latter (17 per cent.) it was so deeply torn as to give rise to profuse hemorrhage and require immediate repair. Moreover, it is evident that the results were much worse in placenta previa than in any other condition, as one-half of such cases were deeply torn and 42 per cent. required immediate repair.

Champetier de Ribes' Balloon. My experience with this method of cervical dilatation is comparatively limited, as it was employed in only fifteen instances, namely: twelve of danger to mother or child, and one each of eclampsia, toxemia, and placenta previa. All of the patients recovered. The cervix was uninjured in six cases, while it was slightly or deeply torn in three and six cases, respectively. In two of the latter, hemorrhage necessitated immediate repair.

Vaginal Cesarean Section. In the 5000 cases under consideration, vaginal Cesarean section was employed twice, once for eclampsia and once for profound toxemia associated with twin pregnancy. In both instances the operation was very successful from a technical point of view, although one of the patients died, partially from hemorrhage following uterine atony and partially from the underlying intoxication.

Critique of Methods. From my experience in the series of cases just considered, as well as in my private practice, I would draw the following conclusions concerning the relative merits of the various operative procedures for the premature termination of pregnancy:

(a) *Krause's Method.* This is the safest method at our disposal in any case in which immediate delivery is not urgently indicated. It should therefore be the method of choice whenever the termination of pregnancy is demanded in cases of broken heart compensation, pyelonephritis, retention of dead fetus and various other indications, and

particularly in all cases of toxemia which have grown gradually worse in spite of appropriate treatment, but in which an outbreak of eclampsia does not appear imminent. Its only drawback consists in its comparative uncertainty, as one has no means of predicting in a given case whether pains will supervene within a few hours after the introduction of the bougie, or whether it will become necessary to introduce a second one at the end of twenty-four hours. In the vast majority of cases, however, labor sets in within this period and progresses in a most satisfactory manner, with a minimum amount of disturbance.

(b) *Harris' Method of Manual Dilatation.* It is difficult to give a perfectly just estimate of the value of this procedure; though as the result of my experience I feel that it is both difficult and dangerous in all cases in which the cervix is intact and the external os not obliterated, except in the occasional instances in which the entire cervix is unusually softened.

Exceptionally, the cervix is so rigid that even preliminary dilatation cannot be effected, and under such circumstances it will naturally be impossible to resort to Harris' method. I have met with only one case of this description, and have already pointed out that the death of the patient from infection was clearly attributable to prolonged and unjustifiable attempts at dilatation by various methods.

More frequently, it is possible to dilate the cervix sufficiently to admit two fingers by means of the instruments of Goodell or Hegar, after which further dilatation may be effected by Harris' method. In many instances, however, this is very difficult and can be accomplished only at the expense of a deep cervical tear, which sometimes extends far up into the lower uterine segment and gives rise to incomplete rupture of the uterus.

Accordingly, I do not believe that dilatation by this method should be attempted in this class of cases, unless the cervix is so soft that it will presumably offer but slight resistance.

In all other cases it would seem to be more conservative to resort to vaginal Cesarean section, or confine oneself to purely medicinal treatment if not prepared to resort to radical surgical measures.

On the other hand, manual dilatation is comparatively safe and readily accomplished when the cervical canal is obliterated and the resistance offered only by the external os. Indeed, under such circumstances, dilatation is frequently so readily effected that the chief care of the obstetrician must be directed toward guarding against its too rapid completion, and I have no hesitation in saying that the more slowly it is effected the better it will be for the patient and the condition of her cervix. For some reason it seems that as soon as the cervix has begun to yield, that is as soon as it will admit the thumb and first two fingers, the obstetrician is usually seized with an almost uncontrollable desire to complete the dilatation as rapidly as possible; and even although perfectly well acquainted with the dangers of rapid operating, he has the greatest difficulty in proceeding sufficiently slowly, being invariably inclined to overestimate the time consumed, and if left to his own sensations will interpret a few minutes by the clock as fifteen or twenty minutes. Accordingly, I have made it a rule to have a clock or watch placed within ready view, by which I can time myself and thereby guard against too great haste. If this precaution is taken and twenty to thirty minutes actually consumed in the operation, one can almost invariably avoid serious lacerations; and I am sure, had this rule been followed in all of our cases, that the degree of traumatism would have been diminished by more than one-half.

When labor has already progressed to such an extent that the external os is partially dilated, the operation is usually most satisfactory and extremely easy; while the danger of cervical rupture is reduced to a minimum, provided the precautions just indicated are carefully followed. I am confident that recourse to the operation under such

conditions has, in my hands, been the means of saving many fetal lives and of relieving a number of patients of unnecessary suffering.

On the other hand, the operation is extremely dangerous in placenta previa, and an earnest note of warning should be sounded against its employment in that condition. As has already been indicated, manual dilatation was followed by deep tears in 50 per cent. of the cases in which it was employed, all but one of which were so severe as to give rise to hemorrhage and require immediate repair. Moreover, in one of these cases the fatal issue was the direct result of the operation, and was due to an incomplete rupture of the uterus.

The liability to injury lies not so much in the operation itself as in the extremely friable condition of the cervix in placenta previa, and even though every precaution may be taken and the operation performed in the most deliberate manner, deep tears will occur when least expected and occasionally lead to death. Thus it would seem that Harris' method is an unsuitable procedure in placenta previa and materially adds to the maternal mortality. Accordingly, in such cases, some other method of treatment should be adopted, as will be indicated below.

(c) *Champetier de Ribes' Balloon*. This method of terminating pregnancy is quite satisfactory where haste is not essential, provided the cervix is sufficiently dilated to permit the introduction of the bag. Under other conditions this cannot be effected until after preliminary dilatation under anesthesia, and occasionally cases will be encountered in which the cervix is so rigid that even this is impossible. In general, however, it may be said that, whenever time is not a serious element, the results obtained by means of the bag are on the whole more satisfactory than those following Harris' method; although stress should be laid upon the fact that occasionally even the expulsion of a large sized bag does not necessarily imply complete dilatation, and

under such circumstances Harris' method must be resorted to if it is desired to bring about immediate delivery.

Reasoning by exclusion, rather than from my own personal experience, I believe that the use of the bag is the treatment par excellence in cases of placenta previa.

(d) *Vaginal Cesarean Section.* This operation, as described by Dührssen, is most satisfactory from an operative point of view, provided one is supplied with suitable instruments and competent assistants. My experience with it, however, has led me to believe that it is not adapted for general employment in private practice, and can be undertaken satisfactorily only by those who possess special surgical training.

In order to obtain a sufficiently extensive view of the field of operation, it is essential that very large vaginal specula be employed, such as those devised by Jacob or Pryor, since the ordinary Simon specula do not permit a satisfactory exposure. When suitable specula are employed the entire lower uterine segment can readily be brought in view, so that the entire operation is performed under the guidance of the eye. Moreover, in my experience, the operation is materially facilitated if both an anterior and posterior incision is made, as recommended by Dührssen, instead of merely an anterior one as practised by many operators.

It has been a matter of great surprise to me how little hemorrhage occurs during the course of the operation, which scarcely exceeds that observed in an ordinary spontaneous labor. There is, however, one point upon which Dührssen lays especial stress, and whose importance cannot be overestimated, and that is the necessity for prophylactic packing of the uterus, as it would seem that there is an unusual tendency toward its relaxation after this operation, and the fatal outcome in one of my cases appeared to be due in great part to the neglect of this precaution.

Thus far Dührssen's vaginal Cesarean section has been performed upon four patients in my clinic, and I have been

so pleased with the results obtained that I feel that in the future it will almost entirely supplant other methods of promptly emptying the uterus when the cervical canal is intact, as it affords a satisfactory means for terminating pregnancy within five or ten minutes, and at the same time does away with the fear of deep and jagged cervical tears, and presents clean-cut incisions which can be united by sutures under the guidance of the eye.

Recommendations for Practice. What I shall now say applies only to well-directed lying-in hospitals, as several of the procedures advocated cannot be carried out in ordinary private practice without undue danger to the patient.

(a) *Induction of Premature Labor.* In the series of cases just considered, we have not thought it necessary to induce premature labor on account of pelvic contraction. I have already elaborated my views on this subject upon several occasions, and shall here only say that I do not consider in the present state of obstetric surgery that such an operation is indicated except under the most exceptional conditions, as I believe that one will save a far greater number of children without materially increasing the maternal mortality by allowing such patients to go to term, and, if spontaneous labor does not occur, effecting delivery by forceps, pubiotomy or Cesarean section, as may seem most appropriate in the individual case.

In all other cases in which the termination of pregnancy is desirable, but haste is not imperative, I believe that almost ideal results will be obtained by Krause's method. In my experience, labor usually sets in within twenty-four hours after the introduction of the bougie, and usually runs a spontaneous course. Moreover, the condition of the cervix is a matter of indifference when this method is to be employed, as an intact canal usually offers no obstacle to the introduction of the bougie.

(b) *Accouchement Forcé.* In the treatment of eclampsia the procedure to be adopted depends almost entirely upon

the condition of the cervix, as I believe that labor should be terminated in every case as soon as consistent with the safety of the patient. In view of what has already been said concerning the danger of attempting to dilate an intact cervical canal by means of Harris' method, I consider that in hospital practice the ideal method of delivery for such cases is by means of the vaginal Cesarean section, and that when this operation is undertaken by a competent operator with trained assistants, and under satisfactory conditions, it will afford almost ideal results. Of course, Harris' method may be employed in the rare cases in which the intact canal feels so soft and succulent that the operator gains the impression that manual dilatation can be effected without great difficulty. But, with this exception, I consider that vaginal Cesarean section will give better results and expose the patient to less danger of laceration and infection than preliminary dilatation by the instruments of Goodell or Hegar, followed by Harris' manual method.

On the other hand, when the cervical canal is obliterated and the resistance is offered only by the external os, dilatation by Harris' method is usually indicated and can be readily effected with but little danger to the patient. In exceptional cases it may appear that the external os is so rigid that dilatation by Harris' method appears impracticable, and under such circumstances the propriety of resorting to vaginal Cesarean section should be considered. When the external os is partially dilated, Harris' method is the procedure par excellence and can yield nothing but good results, provided the operator uses ordinary discretion and guards against too great haste.

No doubt equally good results may be obtained by the bimanual methods of Edgar or Bonnaire, but, as I have had no experience with them, I shall not speak of them.

I have not employed Bossi's metallic dilator, nor have the statements of its most enthusiastic advocates tempted me to do so. As far as I can see, its use is not indicated

when the cervical canal is intact; while in the cases in which the resistance is offered only by the external os, or in which the latter is already partially dilated, it is impossible for it to give better results than those obtained by Harris' method.

(c) *Placenta Previa*. As has already been indicated, I consider that Harris' method is not adapted to the treatment of placenta previa, and the same holds good for dilatation with any metallic instrument, as in such cases the cervix is extremely friable and will tear when least expected.

In my own experience, deep cervical tears occurred in six out of twelve cases, and in one instance death was due to incomplete rupture of the uterus following this method. Moreover, every year in consultation practice, I see one or more women who die not so much from the placenta previa itself as from injury to the cervix following manual dilatation. Accordingly, I feel that this method cannot be too strongly condemned, and in the future I shall hesitate to employ it even in those cases which at first glance appear adapted to it.

On the other hand, I believe that the ideal method of treatment in such cases lies in the use of Champetier de Ribes' balloon or in the performance of bipolar version followed by the gradual extraction of the fetus. The results thus far obtained by abdominal Cesarean section in the treatment of placenta previa are not encouraging, nor do I believe that it is indicated. Possibly the future may teach us that vaginal Cesarean section may have a field of usefulness in this condition, though at present I am not prepared to venture an opinion as to its merits.

(d) *Danger to Mother or Child at Time of Labor*. Accouchement forcé in cases in which labor has already set in and the cervix partially dilated is only justifiable if it can be demonstrated that it can be effected without great danger to the mother, or, at least, that the risks to be encountered are not naturally greater than those arising from the original condition.

Personally I believe, whenever serious danger to mother or child supervenes during the course of labor, that dilatation of the cervix can usually be completed safely and satisfactorily either by the use of the bag or Harris' method; the former if dilatation is only slight, and the latter if it is more advanced.

At the same time it should be stated that neither of these procedures is absolutely devoid of danger, as the cervix was deeply torn in six out of thirty-one cases in which Harris' method was employed, while one required immediate repair to check profuse hemorrhage. This point should be strongly emphasized, as there is a tendency upon the part of many practitioners to interfere upon the slightest indication, and every year I see a number of women in consultation or hospital practice who have been seriously lacerated or profoundly infected by accouchement forcé which had been undertaken merely to hasten the completion of labor, in the absence of a definite indication.

Therefore, I hold that, in this group of cases, the operation should be resorted to only under the strictest indications, when the life of the mother or child is seriously jeopardized, and then only with the greatest care and slowness.